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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,008	08/21/2006	Satoshi Kadokawa	Q96579	6887

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2100 PENNSYLVANIA AVE. NW
WASHINGTON, DC 20037-3213

EXAMINER

YABUT, DANIEL D

ART UNIT	PAPER NUMBER
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3656

NOTIFICATION DATE	DELIVERY MODE
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08/15/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.		Applicant(s)	
	10/590,008		KADOKAWA ET AL.	
	Examiner		Art Unit	
	DANIEL YABUT		3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sada (US Patent 5,885,690).

Sada discloses rolling sliding parts of a surface which contacts another member comprising a(n):

Re claims 1-3

- Outermost surface position is defined as a highest portion out of fine roughnesses existing on the surface (col. 3 ll. 33-35; Fig. 1A)

Regarding claim 1, although Sada discloses the roughness profile R having a maximum height R_y being from 1 to 3 micrometers (col. 3 ll. 32-34) and that "the ratio of the open area of the very small recesses to the whole area of the rolling contact surface 11a, that is, the area ratio is set to 5 to 20% and more particularly, 5 to 10%" (col. 3 ll. 38-41), Sada does not expressly disclose an occupation ratio being set from 90% or more to less than 100%, the occupation ratio being calculated by dividing a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 2.0 micrometers from the outermost surface position by an area of an overall surface of a portion that contacts the other member.

It would have been obvious to one having ordinary skill in the art at the time of the invention to provide an occupation ratio being set from 90% or more to less than 100%, the occupation ratio being calculated by dividing a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 2.0 micrometers from the outermost surface position by an area of an overall surface of a portion that contacts the other member, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). See MPEP 2144.05.

Regarding claim 2, although Sada discloses the roughness profile R having a maximum height R_y being from 1 to 3 micrometers (col. 3 ll. 32-34) and that “the ratio of the open area of the very small recesses to the whole area of the rolling contact surface 11a, that is, the area ratio is set to 5 to 20% and more particularly, 5 to 10%” (col. 3 ll. 38-41), Sada does not expressly disclose an occupation ratio being set from 80% or more to less than 100%, the occupation ratio being calculated by dividing a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.5 micrometers from the outermost surface position by an area of an overall surface of a portion that contacts the other member.

It would have been obvious to one having ordinary skill in the art at the time of the invention to provide an occupation ratio being set from 80% or more to less than 100%, the occupation ratio being calculated by dividing a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.5 micrometers from the outermost surface

position by an area of an overall surface of a portion that contacts the other member, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). See MPEP 2144.05.

Regarding claim 3, although Sada discloses the roughness profile R having a maximum height R_y being from 1 to 3 micrometers (col. 3 ll. 32-34) and that "the ratio of the open area of the very small recesses to the whole area of the rolling contact surface 11a, that is, the area ratio is set to 5 to 20% and more particularly, 5 to 10%" (col. 3 ll. 38-41), Sada does not expressly disclose an occupation ratio being set from 50% or more to less than 100%, the occupation ratio being calculated by dividing a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.0 micrometers from the outermost surface position by an area of an overall surface of a portion that contacts the other member.

It would have been obvious to one having ordinary skill in the art at the time of the invention to provide an occupation ratio being set from 50% or more to less than 100%, the occupation ratio being calculated by dividing a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.0 micrometers from the outermost surface position by an area of an overall surface of a portion that contacts the other member, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or

workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). See MPEP 2144.05.

Sada as modified above further discloses the following:

Re claim 4

- Occupation ratio of a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.5 micrometers from the outermost surface position, to the area of the surface that contacts the other member is set to 80 % or more (see above regarding optimization of ranges; MPEP 2144.05)

Re claim 5

- Occupation ratio of a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.0 micrometers from the outermost surface position, to the area of the surface that contacts the other member is set to 50 % or more (see above regarding optimization of ranges; MPEP 2144.05)

Re claim 6

- Occupation ratio of a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.5 micrometers from the outermost surface position, to the area of the surface that contacts the other member is set to 80 % or more (see above regarding optimization of ranges; MPEP 2144.05),
- Occupation ratio of a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.0 micrometers from the outermost surface position, to the area of the surface of a portion that contacts the other member is set to 50% or more (see above regarding optimization of ranges; MPEP 2144.05)

Re claims 7-12

- The rolling sliding part is a roller constituting a cam follower unit (Fig. 3) in which an outer peripheral surface of a roller (11a) supported rotatably around a roller supporting shaft (12) is brought into contact with an outer peripheral surface of a cam (at 7) via a rolling contact.

Re claim 13-18

- The rolling sliding part is a rocker arm (at 3; col. 5 ll. 52-59) into a part of which a cam follower unit is incorporated.

Re claims 19-24

- The rolling sliding part is an inner ring (near 13; col. 5 ll. 43-51) having a cylindrical inner ring raceway on an outer peripheral surface or a shaft (12).

Re claim 25-30

- The rolling sliding part is a needle (13; col. 5 ll. 43-51) that is provided rollably between a cylindrical inner ring raceway and a cylindrical outer ring raceway (Fig. 2)

Response to Arguments

Applicant's arguments, see the Pre-Brief Conference request, filed 4/28/2011, with respect to the rejection(s) of claim(s) 1-30 under 35 U.S.C. § 102(b) as being anticipated by Sada (US Patent 5,885,690) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of 35 U.S.C. § 103(a) as being unpatentable over Sada (US Patent 5,885,690).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL YABUT whose telephone number is (571)270-5526. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:00 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard W. Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL YABUT/
Examiner, Art Unit 3656
8/4/2011

/Justin Krause/

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Primary Examiner, Art Unit 3656